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VASCULAR DISEASE

RELATIONSHIP BETWEEN CAROTID ARTERY STIFFNESS PARAMETER ? AND BRACHIAL ARTERY FLOW-MEDIATED DILATION IN CORONARY ARTERY DISEASE

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
Monday, April 04, 2011, 3:30 p.m.-4:45 p.m.

Session Title: Peripheral Arterial/Carotid Disease/Aortic Disease
Abstract Category: 11. Peripheral Arterial/Carotid Disease/Aortic Disease
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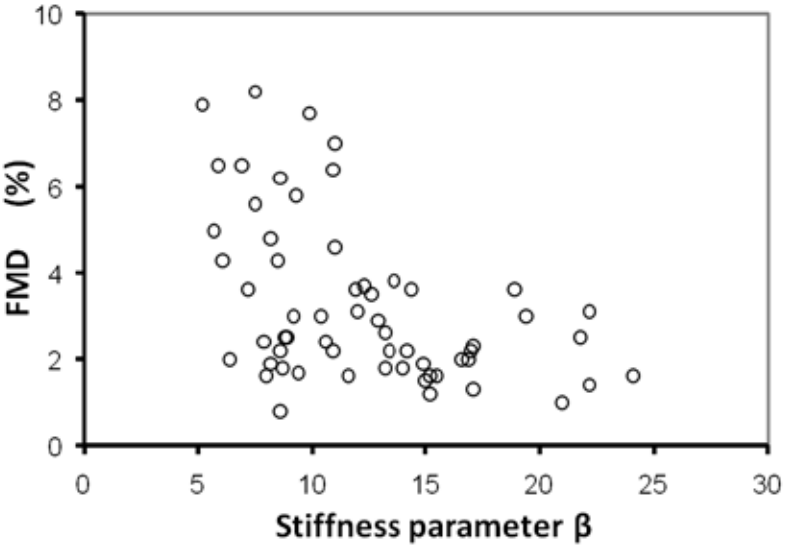
Background: Arterial stiffness has been utilized as one of the non-invasive clinical markers for evaluating systemic atherosclerosis. Newly developed echo-tracking system enables us to obtain stiffness parameter ß (ß) easily from carotid ultrasound examination. On the other hand, brachial artery flow-mediated dilation (FMD) has become an useful non-invasive marker of early systemic atherosclerosis. We evaluated the relationship between the ß and the FMD in patients with coronary artery disease (CAD).

Methods: The ß and FMD were measured in 91 patients (66±7, male 61) with CAD. Carotid artery intima-media thickness (IMT), plaque score, creatinine, LDL-cholesterol, HDL-cholesterol, EPA/AA ratio, HbA1c were also evaluated in the subjects.

Results: The ß was negatively correlated with FMD (r = 0.65 p <0.001, figure). No other risk factors strongly correlated well with the ß. Stepwise multiple regression analysis revealed that FMD, creatinine, LDL-cholesterol and mean IMT were found to be independent determinants of the ß (FMD: p< 0.001, creatinine: p =0.007, LDL-cholesterol: p =0.008, mean IMT: p=0.005).



Conclusion: The ß correlated well with FMD suggesting that the ß is associated with endothelial function which reflects early atherosclerotic change of vessels in CAD. This index may be an alternative predicting parameter for CAD.